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PATENT SPECIFICATION

406.931

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Complete Accepted: March 8, 1934.

COMPLETE SPECIFICATION



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Improvements in and relating to Means for Regulating Delivery of Thread from Supply Bobbins.

I, GUIDO HORN, a German Citizen, trading as GUIDO HORN, MASCHINEN-FABRIK, of 125, Langhansstrasse, Berlin-Weissensee, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

Means for regulating the delivery of thread from supply bobbins and comprising bobbin-brakes and thread delivery devices for braiding machines and other purposes are known in which the bobbin is kept under braking force by a separate brake device the braking action of which is correspondingly reduced while the thread is being consumed by means of a thread tension lever pulling the thread. The object of the present invention is to dispense with an independent self-acting brake device for the bobbin and with this object in view the braking action is obtained by leading the thread coming from the bobbin over a brake lever in such a way that by the pull of said lever the bobbin is kept under braking force. The release of the brake is obtained by leading the thread over a separate thread tension lever which yields according to the pull on the thread, so that, in consequence to the alteration of the thread path the pulling action of the thread upon the bobbin brake lever is reduced until the bobbin is allowed to rotate more freely and to deliver thread.

In the following description the general term "thread" is intended to include wires, cords, cables or the like also.

In the accompanying drawing the invention is shown by way of example.

Fig. 1 is a front elevation and Fig. 2 is a top plan view.

Fixed to the plate *a* of the bobbin carrier is a pin *b* upon which a brake disc *c* provided with a long sleeve is pivoted. The bobbin *d* is carried by this sleeve of the brake disc *c*. A brake lever *f* and a thread tension lever *g* are pivotally arranged upon a short vertical axis *e*. By means of a spring the thread tension lever *g* is turned in the position shown in dotted lines in Fig. 2. This turning movement is limited by a stop shown in

Fig. 2. On exerting a pull on the thread a brake shoe provided at the shorter arm of the double armed brake lever *f* is pressed against the brake disc *c*, so that the bobbin which is sufficiently fixed to the sleeve of the disc *c* is prevented from rotating. With progressive consumption of thread the thread tension lever *g* is brought into the position shown in full lines in Fig. 2. It will be seen from Fig. 2 that the pressure of the thread against the brake lever *f* is reduced by the above mentioned movement of the lever *g*. The brake disc with its bobbin now rotates in accordance with the reduction of the braking pressure; should it happen that more thread is delivered than necessary, the pulling action of the thread upon the brake lever *f* is increased again, whereby the braking force acting upon the bobbin also is increased again.

The tension applied to the thread by the bobbin brake depends on the tension of the spring acting on the thread tension lever *g*. If this spring is heavily tensioned, the pressure of the thread against the brake lever is increased and the braking force also is then accordingly increased.

In the example shown the brake lever and the thread tension lever are arranged one above the other and are rotatable around the same axis. Of course, the hub of the brake lever *f* may be made longer to afford a better bearing and the thread tension lever *g* may be pivotally arranged upon the hub of the brake lever. Furthermore instead of employing a brake shoe any other form of brake may be substituted, such as a band brake for example. The pivot centres of the two levers may also be spaced from each other. The spring acting on the thread tension lever is, of course, adjustable or exchangeable. The construction with levers having one bearing only is principally adapted for light thread tensions, or short bobbins respectively. In case of heavy strains the levers may be journalled in two bearings, one on either side. Besides, the brake lever and the thread tension lever may be arranged separated from the bobbin in such a manner that

- the thread on its way to the thread tension lever passes over suitable guiding elements. If under such conditions the brake lever is suitably shaped its short arm may still act upon the brake disc, otherwise suitable transmitting gears must be provided.
- Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—
1. Means for regulating the delivery of thread from supply bobbins in which the thread, the wire or the like is first led around the longer arm of a brake lever and then over a thread tension lever, whereby on exerting a pull on the thread first of all the brake lever is moved in such a manner as to effect braking of the bobbin until the thread tension lever yields to the pulling force of the thread to such a degree that in consequence of the altered path of the thread the pulling force of the thread upon the brake lever is reduced to such an extent that the bobbin rotates more freely and correspondingly increases the thread delivery.
 2. Means for regulating the delivery of thread from supply bobbins, substantially as described with reference to or as shown in the accompanying drawing.

Dated this 31st day of August, 1933.
DICKER, POLLAK & MERCER,
Chartered Patent Agents,
20 to 23, Holborn, London, E.C. 1,
Agents for the Applicant.

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FIG. 1

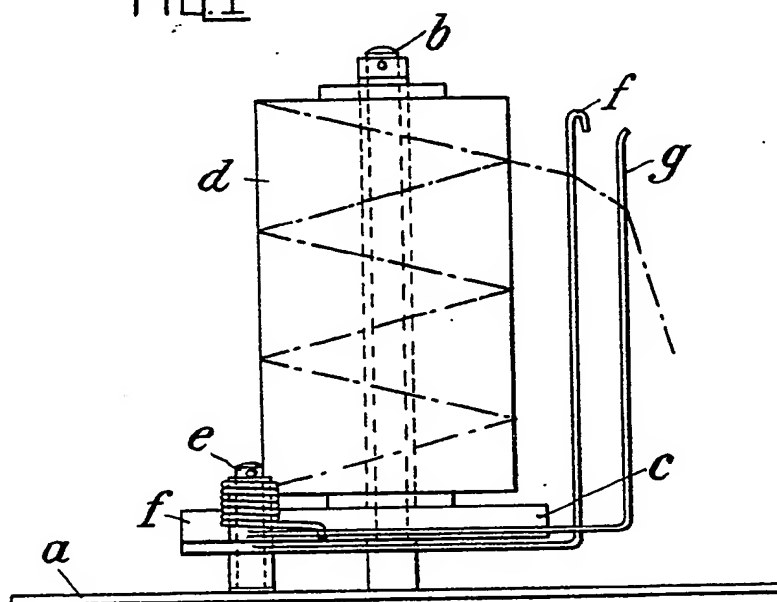
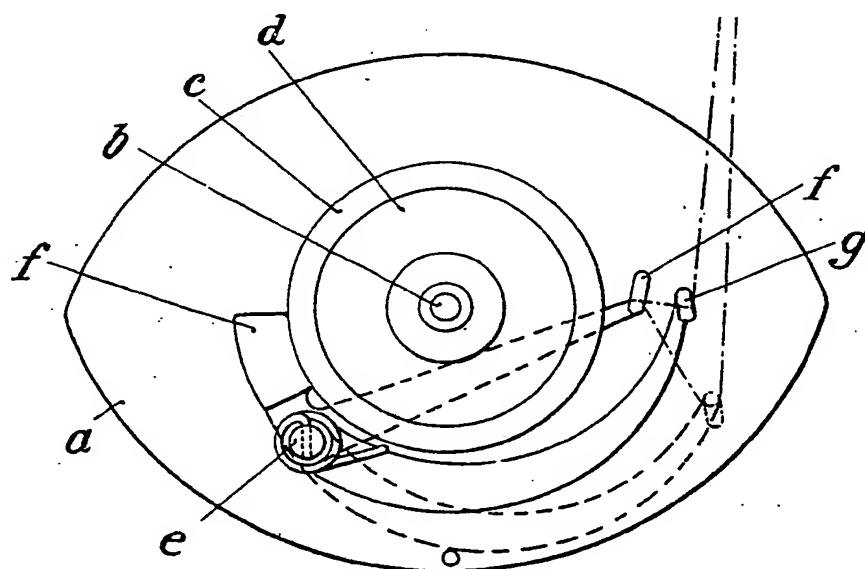


FIG. 2



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